NEW BOOKS

"Handbook of Chemistry and Physics," 57th edition, edited by R. C. Weast. Published by CRC Press, Inc., Cleveland, Ohio (1976). 2365 pages; $29.95.

The 57th edition of the "Handbook of Chemistry and Physics" was published in August and includes new information on fixed points and phase equilibrium boundaries for parahydrogen. New data on thermal conductivity of liquid fluorocarbons have also been added. The section on the elements has been updated and completely retypeset for easier reading. Copies of the Handbook may be ordered from booksellers or from CRC Press, Inc., 18901 Cranwood Parkway, Cleveland, Ohio 44128.

BOOK REVIEWS

"Of Acceptable Risk: Science and the Determination of Safety," by William W. Lowrance. Published by William Kaufmann, Inc., Los Altos, California (1976). 180 pages; $4.95.

Environmental and ecological problems have resulted increasingly in public debates of scientific experts, both pro and con. Drugs, food additives, and products in general are increasingly being critically evaluated by regulatory agencies, manufacturing companies, and consumer advocates. The conflicting views and interpretations of data of all these groups have lead to confusion among the lay public and, indeed, scientists in general, as to the validity of claims of benefit, risk, and safety of the product or process debated.

Dr. Lowrance's book is a valuable primer for scientists, politicians, lay public, management personnel, and all others who have an interest in assessing the risk and safety of products and processes either voluntarily assured by an individual or involuntarily borne by the public. In this short but well-referenced book, a methodical, definitional approach is used with numerous examples and presentation of alternate viewpoints. Chapter 1, "The Safety Problem," lays out the general tone in that it is a discussion of the hazards that change and arise as civilization becomes more complex, i.e., DDT as the answer to insect and disease invasions posed a new set of hazards to animals and humans.

Chapter 2, "Measuring Risk," follows from a definition of safety made in the initial chapter: "A thing is safe if its risks are judged to be acceptable." Expanding on this definition, Dr. Lowrance points out that "this definition emphasizes the relativity and judgmental nature of the concept of safety" and that "measuring risk [is an] objective but probabilistic pursuit; and judging the acceptability of that risk (judging safety) [is] a matter of personal and value judgment." Therefore, Chapter 2 points out how evidence is gathered, assembled, correlated, and, most importantly, interpreted. The difficulties involved in all these stages are detailed and incisive, and demonstrate the problems of data acquisition and why disparate groups can use the same data for differing conclusions.

Chapters 3 and 4, "Judging Safety" and "Safety Issues as Public Problems," bring into focus the social and political value judgments to be made after the risk or probable risk is "scientifically" assessed. These excellent chapters present consumer, manufacturer, and governmental points of view and considerations raised by these varied political power sources. Balance is sought by the author for all these opposing viewpoints as they approach value judgments on safety. Lowrance has succeeded admirably in this, but, in the judgment of this reviewer, has, as a result, presented a stronger argument for the manufacturer. This, possibly, to prove the objectivity of the book, for he departs from this in a short section where he clearly states that his personal opinion is that "scientists, engineers, designers, architects, physicians, public health experts, and other technically trained people **do** have special responsibilities to the rest of society with respect to personal safety." He then goes on to elucidate this responsibility of the scientist and joins the ranks of us who believe that the scientists must take responsibility for their work and **the consequences** of that work.

Chapter 5, "Making Safe," again is a detailed exploration of how one approaches the problem of criteria, standards, design, and regulation of product safety both from the technical and political view. The book ends with Chapter 6, "DDT, An Archetypal Modern Problem," which gives an all too brief outline of the historical development of this chemical from panacea to hazard.

This book should be required reading for all who are concerned with the internal and external aspects of their personal environment. Particularly, it should be required for all scientists, especially those who are engaged in product research and/or whose work would affect the society we live in. The scientists of today must realize that, no longer, are they isolated in their laboratories, and that they cannot allow the applications of their research to rest on the social and political decisions of others less technically trained.

Julius Klerer
The Cooper Union
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Three $1000 Electrochemical Society Summer Fellowship Awards to be Granted

The Electrochemical Society will offer three fellowship awards for qualified graduate students for the summer of 1977. Each award will have a stipend of $1000 and its purpose is to assist the student to continue his graduate work during the summer months in a field of interest to The Electrochemical Society. These awards are to be known as The Edward Weston Fellowship Award, The Colin Garfield Fink Fellowship Award, and The Joseph W. Richards Fellowship Award.

Candidates' qualifications: "Each award shall be made without regard to sex, citizenship, race, or financial need. They shall be made to graduate students pursuing work between the degrees of B.S. and Ph.D., in a college or university in the United States or Canada, and who will continue their studies after the summer period. A previous holder of an award is eligible for reappointment."

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4. Two letters of recommendation, one of which should be from his research adviser.
5. Successful recipients of fellowships shall agree not to hold other appointments or other fellowships during the summer of 1977.

Application forms are available from the Chairman of the Fellowship Awards Subcommittee, to whom completed applications and letters of recommendation should be sent: Professor H. B. Herman, Department of Chemistry, the University of North Carolina at Greensboro, Greensboro, North Carolina 27412.

Deadline for receipt of completed applications will be January 1, 1977, and award winners will be announced on May 1, 1977.

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